

What is claimed is:

1. An isolated nucleic acid expressed by human cancer cells comprising:
 - (i) the nucleotide sequence of SEQ ID NO: 67 or 69;
 - (ii) a nucleotide sequence that is at least 90% identical to SEQ ID NO: 67 or 69;
 - (iii) a nucleotide sequence that is complementary to (i) or (ii); or
 - (iv) a fragment of (i), (ii), or (iii) having a size of at least 20 nucleotides in length.
2. The isolated nucleic acid of claim 1 comprising the nucleotide sequence of SEQ ID NO: 67 or 69, or a fragment thereof.
3. A primer mixture comprising primers that result in the specific amplification of any one of the nucleic acids of claim 1.
4. An antigen expressed by human cancer cells comprising:
 - (i) an antigen encoded by the nucleic acid of SEQ ID NO: 67 or 69;
 - (ii) an antigen having the amino acid sequence of SEQ ID NO: 68 or 70; or
 - (iii) a fragment or variant of (i) or (ii).
5. A human cancer antigen of claim 4 encoded by the nucleic acid of SEQ ID NO: 67 or 69.
6. A human cancer antigen of claim 4 comprising the amino acid sequence of SEQ ID NO: 68 or 70.
7. A monoclonal antibody or antigen-binding fragment thereof that specifically binds to a cancer antigen of claim 4.
8. The monoclonal antibody of claim 7, wherein the antibody is a domain deleted antibody.

9. The domain deleted antibody of claim 8, wherein the antibody lacks a C_H2 domain.
10. The monoclonal antibody of claim 7, further comprising a detectable label, wherein the detectable label is attached directly or indirectly to the antibody.
11. The monoclonal antibody of claim 7, further comprising a therapeutic agent, wherein the therapeutic agent is attached directly or indirectly to the antibody.
12. The monoclonal antibody of claim 11, wherein the therapeutic agent is a cytotoxin, a growth factor, or a drug.
13. The monoclonal antibody of claim 12, wherein the cytotoxin is a therapeutic radiolabel.
14. The monoclonal antibody of claim 13 wherein the therapeutic radiolabel is ⁹⁰yttrium.
15. The monoclonal antibody of claim 13 wherein the therapeutic radiolabel is ¹¹¹indium.
16. A diagnostic kit for detecting cancer comprising an isolated nucleic acid according to claim 1 and a detectable label.
17. A diagnostic kit for detecting cancer comprising primers according to claim 3 and a diagnostically acceptable carrier.
18. A diagnostic kit for detecting cancer comprising a monoclonal antibody according to claim 10.
19. A method of detecting cancer comprising (i) obtaining a human cell sample; and (ii) determining whether such cell sample expresses a cancer gene having a nucleotide sequence of SEQ ID NO: 67 or 69.

20. The method of claim 19, wherein said method comprises detecting the expression of the cancer gene using a nucleic acid that specifically hybridizes thereto.

21. The method of claim 19, wherein said method comprises detecting the expression of the cancer gene using primers that result in the amplification thereof.

22. The method of claim 19, wherein the expression of said cancer gene is detected by performing an assay to detect the presence or level of the antigen encoded by said gene.

23. The method of claim 22, wherein the assay involves use of a monoclonal antibody, or antigen-binding fragment thereof.

24. The method of claim 11, wherein the assay comprises an ELISA or competitive binding assay.

25. A method for treating cancer in a subject comprising administering to the subject a therapeutically effective amount of a ribozyme or antisense oligonucleotide that inhibits the expression of a gene having a nucleotide sequence of SEQ ID NO: 67 or 69, or fragment or variant thereof.

26. A method for treating cancer in a subject comprising administering to the subject a ligand that specifically binds to a nucleic acid molecule comprising a nucleotide sequence of SEQ ID NO: 67 or 69, or fragment or variant thereof.

27. The method of claim 26, wherein said ligand further comprises a therapeutic agent.

28. A method for treating cancer in a subject comprising administering to the subject a therapeutically effective amount of:

- (a) a cancer antigen encoded by the nucleic acid of SEQ ID NO: 67 or 69;
and
- (b) an adjuvant;

whereby a humoral or cytotoxic T-lymphocyte response to the cancer antigen is induced.

29. A method for treating cancer in a subject comprising administering to the subject a therapeutically effective amount of:

- (a) a cancer antigen comprising the amino acid sequence of SEQ ID NO: 68 or 70; and
- (b) an adjuvant;

whereby a humoral or cytotoxic T-lymphocyte response to the cancer antigen is induced.

30. A method for treating cancer in a subject comprising administering a therapeutically effective amount of a ligand which specifically binds to a cancer antigen comprising:

- (i) an antigen encoded by a nucleic acid molecule a nucleotide sequence of SEQ ID NO: 67 or 69, or fragment or variant thereof; or
- (ii) an antigen having an amino acid sequence of SEQ ID NO: 68 or 70; or fragment or variant thereof.

31. The method of claim 30, wherein the ligand is an antibody, or antigen-binding fragment thereof.

32. The method of claim 30 wherein the ligand is a small molecule.

33. The method of claim 30 wherein the ligand is a peptide.

34. The method of claim 30, wherein the ligand further comprises a therapeutic agent.

35. The method of claim 30, wherein the therapeutic agent is a cytotoxin, a growth factor, or a drug.

36. The method of claim 35, wherein the cytotoxin is a therapeutic radiolabel.

37. The method of claim 36 wherein the therapeutic radiolabel is ⁹⁰yttrium.
38. The method of claim 36 wherein the therapeutic radiolabel is ¹¹¹indium.